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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,038	02/02/2004	Eiichi Okutsu	FS-F03226-01	7584
37398	7590	05/18/2005	EXAMINER	
TAIYO CORPORATION 2111 JEFFERSON DAVIS HIGHWAY #412, NORTH ARLINGTON, VA 22202			CHEA, THORL	
			ART UNIT	PAPER NUMBER
			1752	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/768,038

Applicant(s)

OKUTSU ET AL.

Examiner

Thorl Chea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. Claims 1-2 are objected to because of the following informalities: the term "smaller" should be changed to "less" or "shorter" since this term modify the "distance". See claim 1, line 11 and claim 2, line 4. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claiming of an "alkyl group having an unsaturated bond" is unclear in view of conventionally known as an "alkyl group". The alkyl group known in the art is the group " $C_nH_{2n+1}$ ", and there is no unsaturated bond associated therein. Accordingly, the claiming of "alkyl group having an unsaturated bond" is indefinite.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Morita et al (US 2003/0215756), Fukui et al (US Patent No. 5,041,369) and Kudo (US 2004/0005521).

Morita et al disclose a photothermographic material containing a composition of two bisphenol compounds, the bisphenol of formula A-1 and the bisphenol of formula A-2. The bisphenol A-2 is within the scope of formula (R1) of the claimed invention. See exemplified samples on pages 18-23, compound I-18 to I-65. The compound of formula A-1 differs from the compound of formula (R2), X in the formula (A-1) is a chalcogen or CHR, wherein R is a hydrogen or an alkyl group. The material is process within a period of 1 sec. to 2 mn at a temperature of 80 °C to 200 °C. See page 42, [0352], [0353]; see also the apparatus of Fig 1 and the description thereof on page 42, [0350] having exposure portion (120) and developing section 130; the laser scanning exposure in column 41, [0338] to [0348]; and the silver coverage from 0.3 to 1.5 g/m<sup>2</sup> on page 30, [0329]. Fukui et al disclose the bisphenol within the scope of formula (R2) in column 7, formula (III) wherein Z represent a divalent group such as alkyldiene group, an aralkyldiene group, or a sulfur; similarly Kudo discloses the claimed bisphenol on page 16 such as compound A-17 and A-20. Morita et al differs from the claimed invention in its failure to disclose the alkenyl group and an alkyl group having unsaturated bond claimed in the present claimed invention. However, the group as claimed have been known to use in association with a divalent group of a bisphenol compound such as taught in Fukui et al and Kudo. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use a divalent group such as alkyldiene group which is a known equivalent to an alkyl group or a chalcogen in

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combination with a known heating process for forming an image with time of 1 sec. to 2 mn such as suggested Morita et al with a reasonable expectation of achieving a material with high photographic density, improved image tone and image stability.

6. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Morita et al (US 2003/0215756), Fukui et al (US Patent No. 5,041,369) and Kudo (US 2004/0005521).

Morita et al disclose a photothermographic material containing a composition of two bisphenol compounds, the bisphenol of formula A-1 and the bisphenol of formula A-2. The bisphenol A-2 is within the scope of formula (R1) of the claimed invention. See exemplified samples on pages 18-23, compound I-18 to I-65. The compound of formula A-1 differs from the compound of formula (R2), X in the formula (A-1) is a chalcogen or CHR, wherein R is a hydrogen or an alkyl group. The material is process within a period of 1 sec. to 2 mn at a temperature of 80 °C to 200 °C. See page 42, [0352], [0353]; see also the apparatus of Fig 1 and the description thereof on page 42, [0350] having exposure portion (120) and developing section 130; the laser scanning exposure in column 41, [0338] to [0348]; and the silver coverage from 0.3 to 1.5 g/m<sup>2</sup> on page 30, [0329]. Fukui et al disclose the bisphenol within the scope of formula (R2) in column 7, formula (III) wherein Z represent a divalent group such as alkyldiene group, an aralkyldiene group, or a sulfur; similarly Kudo discloses the claimed bisphenol on page 16 such as compound A-17 and A-20. Morita et al differs from the claimed invention in its failure to disclose the alkenyl group and an alkyl group having unsaturated bond, and distance between the scanning line of the laser irradiating mean and inserting portion of the thermal developing unit of equal to or smaller than 50 cm present in the claimed

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invention. However, the group as claimed have been known to use in association with a divalent group of a bisphenol compound such as taught in Fukui et al and Kudo, and the distance of the laser exposure mean and the heating unit may vary accordingly to the size of the apparatus. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use a divalent group such as alkylidene group which is a known equivalent to an alkyl group or a chalcogen in combination with the use of the apparatus suggested Morita et al with a reasonable expectation of achieving a material with high photographic density, improved image tone and image stability. The worker of ordinary skill in the art would prefer to use the exposure unit close to the heat developing unit in order to reduce the processing time.

7. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Morita et al (US 2003/0215756) in view of Fukui et al (US Patent No. 5,041,369) or Kudo (US 2004/0005521) further in view of Oyamada et al (US 2004/0038156) or Yamane (US 6,800,427).

Morita et al disclose a photothermographic material containing a composition of two bisphenol compounds, the bisphenol of formula A-1 and the bisphenol of formula A-2. The bisphenol A-2 is within the scope of formula (R1) of the claimed invention. See exemplified samples on pages 18-23, compound I-18 to I-65. The compound of formula A-1 differs from the compound of formula (R2), X in the formula (A-1) is a chalcogen or CHR, wherein R is a hydrogen or an alkyl group. The material is process within a period of 1 sec. to 2 mn at a temperature of 80 °C to 200 °C. See page 42, [0352], [0353]; see also the apparatus of Fig 1 and the description thereof on page 42, [0350] having exposure portion (120) and developing section 130; the laser scanning exposure in

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column 41, [0338] to [0348]; and the silver coverage from 0.3 to 1.5 g/m<sup>2</sup> on page 30, [0329]. Fukui et al disclose the bisphenol within the scope of formula (R2) in column 7, formula (III) wherein Z represent a divalent group such as alkyldiene group, an aralkyldiene group, or a sulfur; similarly Kudo discloses the claimed bisphenol on page 16 such as compound A-17 and A-20. Yamane and Oyamada et al each discloses a heat development apparatus wherein the exposure unit close to the heat development unit.

Morita et al differs from the claimed invention in its failure to discloses the alkenyl group and an alkyl group having unsaturated bond, and distance between the scanning line of the laser irradiating mean and inserting portion of the thermal developing unit of equal to or smaller than 50 cm present in the claimed invention. However, the group as claimed have been known to use in association with a divalent group of a bisphenol compound such as taught in Fukui et al and Kudo, and the apparatus wherein the exposure unit close to the heat development unit are in short distance from one to to another have been known in Yamane and Oyamada. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use a divalent group such as alkyldiene group which is a known equivalent to an alkyl group or a chalcogen in combination with the use of the apparatus taught in Yamada or Oyamada et al with a reasonable expectation of achieving a material with high photographic density, improved image tone and image stability.

### *Conclusion*

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.


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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328.

The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Thorl Chea  
Primary Examiner  
Art Unit 1752

Tch   
May 13, 2005